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ABSTRACT

The Employment Training Panel (ETP) contracted with California State University-Northridge to review the fixed fee structure ETP used to pay contractors for training provided under ETP. Three research questions were investigated: what other institutions use the fixed fee and what they pay for; whether ETP's fixed-fee rates were reasonable in comparison with rates charged by public and private entities; and whether use of one fee for both vendor and in-house training providers was reasonable. Researchers interviewed ETP executive staff, training managers in 15 other state-funded training programs, and training managers in manufacturing firms; analyzed an extensive training program in Illinois; and conducted a pricing survey of private for-profit training providers and higher education institutions. They found no identical fixed-fee models for state-training programs, but ETP's fixed fee appeared to be substantially below the costs of training in a similar Illinois training program. ETP's fixed fee was below the median price for the larger training market; was higher than the median market price in some areas of training and below it in others; and was generally lower than fees charged by private for-profit training providers and generally higher than fees charged by higher education institutions. Of five policy options generated, the project recommended that ETP establish a two-tiered price, a higher price for customized training and a lower price for uncustomized training. (Appendixes include summaries of the state survey and interviews with inhouse trainers.) (YLB)

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Is the Price Right?
An Analysis of ETP's Fixed Fees

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Is the Price Right?
An Analysis of ETP's Fixed Fees

Executive Summary

In April 1997, the Employment Training Panel (ETP) contracted with Cal State Northridge's College of Business Administration and Economics to review the current fixed fee structure which ETP uses to pay contractors for training provided under ETP. Specifically, the project was charged with answering three questions:

1. Are there other institutions that use the fixed fee, and what do they pay for?
2. Are ETP's fixed-fee rates reasonable in comparison with rates charged by other public and private entities?
3. Is it reasonable to use one fee for both vendor and in-house training providers?

To answer these questions, the study team conducted interviews with ETP executive staff, interviewed training managers in 15 other state-funded training programs, analyzed an extensive training program in Illinois, interviewed training managers in manufacturing firms, and conducted a pricing survey of private for-profit training providers and higher-education institutions.

Results

We drew four conclusions from the results of our research.

1. We found no identical fixed-fee models for state-training programs, but it appears that ETP's fixed fee is substantially below the costs of training in a similar Illinois training program.

Our research into a number of other states' funded training programs found a variety of cost reimbursement models but no other fixed-fee-funding models. We were able to get data on one major state-training program, the Illinois Industrial Training Program, from which we could make a price comparison. The results reveal that ETP's fees for classroom training are substantially below both the planned cost ($18 per classroom hour) and actual cost per completer hour ($26 per classroom hour).

2. ETP's fixed fee is below the median price for the larger training market.

In benchmarking ETP's fee against the market for training services provided by both higher education institutions and private training providers, we found that ETP's per hour classroom fee for vendor training of $13 was below the market median of $15. Yet due

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to the distribution of prices in our survey, the ETP fee was in the 47th percentile indicating that despite the two-dollar gap it is quite close to the median.

3. ETP's fixed fee is higher than the median market price in some areas of training and below it in others.

In benchmarking ETP's fee against the market for training services in specific areas we found it was substantially lower than the market median in several areas, for example, office automation $18.33, CAD/CAM $20.00, and computer programming $20.54. Conversely, the ETP fee was slightly higher than the median in other areas, for example, customer service $12.50, TQM $11.88, and basic skills $10.00.

4. ETP's fixed fee is generally lower than fees charged by private for-profit training providers and generally higher than fees charged by higher-education institutions that provide contract training services.

In comparison with ETP's fixed fee of $13 per instructional hour for vendor training, the median fee for all types of private-training provided training was $20.83. The median fee for higher-education provided training was only $10, less than half of the private fee and substantially below ETP's fee.

Recommendations

Based on the results of the study we generated five policy options for the Panel, we then recommend one of the four options as the best option.

1. The Panel could keep the existing dual-fee system and not change anything.

The current system is widely understood and works, in that it has achieved substantial administrative efficiencies over the old budget system. The current price is low in relation to the overall market, minimizing the risk of overpayments.

2. The Panel could establish a single price for retrainee classroom training, and a second price for retrainee SOST, and similar somewhat higher prices for new-hire training.

This strategy eliminates the separate prices for in-house and vendor training and in our view creates the correct incentives for employers. The question then is: where should the price be set? There is no perfect single price. Prices that are relatively low in comparison with the overall market will underpay for most types of training and overpay for a few types of training. It may well drive projects away from hard skills training and into lower cost soft skills training. Relatively high prices conversely create the risk that ETP will overpay for a larger portion of training, but it will encourage more highly-priced hard-skills training.

3. The Panel could establish separate fixed fees for the most common skill areas based on market prices.

Our results show that training prices vary significantly by field. To remove some of the incentive problems created by a single fixed fee, the Panel could establish a range of prices for different categories of training. ETP had experience with differential fees in the early 1990s and found them unsatisfactory for several reasons.

4. The Panel could establish a two-tiered price, one higher price for customized training and a second lower price for uncustomized training.

This strategy deals with a major objection to the current fee structure, which is that it creates a powerful incentive for vendors to drive down quality to achieve larger profits. In our experience, this is done principally by substituting generic, off-the-shelf training curricula and materials for careful needs assessment, customized curricula and materials. Paying more for customized training would create an incentive to improve the quality of training, and would not overpay the providers of lower-cost training.

5. The Panel could end the fixed fee system and go back to approving individual budgets for each project.

The advantage of this approach is it offers the chance that each project would be reimbursed at the level of its actual costs, thus reducing the risk of both over and underpaying, but would substantially increase administrative burden for contractors and staff.

Recommendation

The Panel should establish a two-tiered price, a higher price for customized training and a second lower price for uncustomized training.

Our analysis of the five alternatives convinces us that a new fee structure with a two-tiered fee, a higher price for customized training and a second lower price for uncustomized training is the best alternative. This fee structure allows the Panel to keep the administrative efficiencies achieved by the current fixed fee and create an incentive for contractors to provide higher-valued customized training. By paying less for training which is not customized, ETP addresses a critical problem with the current fixed fee system which is that it creates an incentive to drive down quality to increase profits. It also sends a powerful message that the Panel values customized, high-quality training.

Is the Price Right?
An Analysis of ETP's Fixed Fees

Introduction

In 1990, the California Legislature approved legislation allowing ETP to set fixed fees for training contracts based on its own experience[1]. The ETP staff considered the fixed fees a desirable alternative to individual budgets for each proposed project, because it was time consuming for contractors to develop comprehensive, itemized budgets and difficult for the staff to evaluate the resulting detailed budgets. In addition, some staff believed that budgets allowed contractors to manipulate the system and get costs approved that were not appropriate for the project.

The initial fixed fees were developed by reviewing previous ETP budgets and the charges of a variety of contract training providers in state government and outside. The resulting initial set of fixed fees was in effect from 1990 to 1994, and these fees varied by type of training, type of trainee, and by training provider. The fixed-fee structure identified 14 categories of training. Within each type of training, the fee could vary by the type of trainee (retrainee versus new hire) and by type of training provider (employer versus training agency).

The initial set of fixed fees was revised in 1994 with the intent to broaden and simplify its application. The intent to broaden and simplify the fees was manifest in dropping the variation in the fixed fee by type of training. This meant that new fixed fees would not have to be established for new types of training, and it eliminated the negotiation of "hybrid fixed fees" for projects that involved two or more types of training. Eliminating the differential fees for different types of training also eliminated the incentive for training providers to structure the training to capture a higher fixed fee. ETP staffers had experienced many lengthy and some heated discussions and negotiations with training providers over the classification and appropriateness of the type of training being proposed. The revised fixed-fee structure did retain the different fees for different trainees (retrainees versus new hires), but revised the basis for differential fees by training provider to distinguish between in-house training providers versus training agencies or training vendors.

The current fixed fee policy is set out in "Operational Directive 94-029" which was last revised May 9, 1997. The policy fixes fees per trainee hour. Thus, employers are compensated $13 for one trainee being trained for one hour in a classroom. Applicants who wish to be paid at a different rate retain the option of making a proposal with a budget rather than utilizing the fixed fee. In practice, budgets are discouraged by the Panel staff, and used only rarely in large, complex projects. The current policy, as summarized in Table 1 below, actually sets four separate fixed fees depending on the

[1] ETP Legislation, Section 10206 (a) (1) (A)

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trainee, the training provider, and the type of training, classroom or SOST (structured on-site training).

Table 1
Current ETP Fees

Training Provider	Class/ Lab Cost per Trainee Hour	SOST Cost per Trainee Hour
Retrainee Rates		
Vendor/Training Agency	$13	$8
In-house Training Provider	$10	$8
New-hire Rates		
Vendor/Training Agency	$14	$8
In-house Training Provider	$10	$8

Another important feature of the current fixed fee structure is that class size is limited to 20 or fewer for retrainees and 15 or fewer for new hires. ETP offers flexibility in class size allowing some classes to be over 20 in projects with multiple classes. The SOST fee assumes 10 trainees to one trainer. Thus a maximum-sized retrainee class would generate $260 per instructional hour for a training vendor and $200 per hour for an in-house training unit.

There are several assumptions which underlie the current rate structure.

1. The purpose of the ETP fee is not to provide a partial incentive for training but to compensate employers for their "allowable costs." These are essentially the costs, other than employee compensation, directly related to training.
2. Overhead or administrative costs are assumed to be covered by the fee.
3. The fee is assumed to cover the costs of most types of ETP sponsored training.

The Problem

As with most public polices, the fixed-fee system has solved some problems but also generated some unintended consequences. Most observers agree that the fixed fee has streamlined the ETP application process and prevented misspending of ETP money on inflated budgets, but the fixed fee system has spawned other issues.

First, there is some evidence that the fixed fee is not covering all of the "allowable costs" for a substantial number of employers. A recent survey of employers found that 40% of employers reported that the fixed fee on average covered only 72% of their direct training costs[2].

[2] Moore, Richard W., Blake, Daniel R., Cohen, Michael, and Anacker, Christopher *ETP and Its Subcontractors and Consultants*, California State University, Northridge, 1997.

As training subcontractors and consultants have played a growing role in the development and implementation of ETP projects, the consequence of the fixed fee in shaping their behavior has raised other issues. Some ETP staff believe the fixed fee provides an incentive for subcontractors to drive down the quality of training in order to reduce costs and increase profit margins. A related concern is that training subcontractors could substitute generic training and materials for customized training to keep costs low and profits high. A related issue is the danger that a relatively low price set by the fixed fee could create an incentive for subcontractors and consultants to develop lower cost soft skills projects such as customer service and TQM training, rather than specific hard skills training.

These and other issues have led the Panel and its staff to reconsider the fixed fee structure.

The Purpose of the Study

In April 1997, the Employment Training Panel contracted with Cal State Northridge's College of Business Administration and Economics to review the current fixed fee structure. Specifically, the project was charged with answering three questions:

1. Are there other institutions that use the fixed fee and what do they pay for?
2. Are ETP's fixed-fee rates reasonable in comparison with rates charged by other public and private entities?
3. Is it reasonable to use one fee for both vendor and in-house training providers?

Methods

To answer the questions posed above, several methods were used. We conducted interviews with the ETP executive staff in Sacramento as well as in-house training manager interviews. An extensive survey of other states' training programs was also undertaken. To locate any relevant studies or useful comparative data we contacted professional associations and conducted a computerized search. We also conducted a survey of private and higher education contract training providers to collect data to benchmark ETP's price. Each method is described in detail below.

Interviews

- *ETP Executive-Staff Interviews*

The purpose of the executive-staff interviews was to obtain their views of the advantages of and problems with the current fixed-fee policies. We interviewed all of the executive staff members in person, one on one, in July 1997.

- *Training Manager Interviews*

The purpose of the training manager interviews was to profile the level of in-house training costs and the relative importance of the various components of these costs. Training managers in medium and large manufacturing firms were interviewed. The profiles include estimates of the cost per trainee hour for specific types of training, as well as a description and general percentage breakdown of the elements upon which in-house training costs are based (e.g., salaries, materials & supplies, travel costs, etc.).

We interviewed ten training managers between August and September 1997. The training managers interviewed were selected through our network of contacts.

State Training Survey

- *Sample*

Fifteen states with state funded training programs believed to be similar to ETP's were contacted in order to review their funding policies and procedures. The states with the largest budgets were chosen; budgets ranged from $50 million in New Jersey to $3.3 million in Kentucky.

The states chosen were Alabama, Georgia, Illinois, Indiana, Iowa, Kentucky, Michigan, Missouri, New Jersey, North Carolina, Ohio, Oklahoma, Pennsylvania, Rhode Island, and South Carolina. We were unable to obtain substantial information from North Carolina, Oklahoma, and Rhode Island.

- *Method*

We interviewed a training management staff member from each state over the phone in order to gain insight into the various programs. States were questioned with regard to necessary qualifications to receive training, cost structure, and any limitations of the program. Information packets were also requested from each state.

States were contacted between June 1997 and August 1997.

Professional Associations

Both the American Society for Training and Development (ASTD) and the Society of Human Resource Managers (SHRM) were contacted to locate any existing relevant studies.

Related Research

An extensive computerized search of Lexis-Nexis, ERIC, CARL/UnCover, Infotrac, and FirstSearch was undertaken to identify relevant published studies.

Public/Private Benchmarking Survey

To benchmark the current fixed fee against the market fees for similar training provided by public and private training providers in California, we collected price information from a minimum of 5 higher education and 10 private representative training providers for 9 types of training specified by ETP. In many categories, we collected data from more than 15 training providers. Training categories were customer service, management skills, TQM, project management, SPC, office automation, CAD/CAM, computer programming, and basic skills.

- *Sample*

We first used the ASTD directory to obtain our sample of private trainers. As this directory did not yield a large enough sample, the Consultants and Consulting Directory was used to pull a random sample[3]. As we had difficulty completing certain categories, we also used a snowball sample (in which we asked survey respondents to identify other companies which train in the same field) when necessary. Any trainer previously associated with ETP was excluded to prevent bias.

We then used EDD's State Training Inventory to pull a random sample of public and private higher education institutions which provided contract training to businesses.

- *Survey*

Each organization was surveyed with regard to the type of training offered, the length of training, class size, and class cost. This information was used to calculate per trainee hourly costs against which ETP's fees could be benchmarked.

- *Analysis*

Data from the survey were used to create a variety of benchmarking groups across the various training categories. For example, we calculated a benchmark for each training area, as well as an overall benchmark for all private training providers and all higher education contract training providers.

Results

1. Are there other institutions that use the fixed fee, and what do they pay for?

To answer this question, we contacted 15 states with customized state funded training programs. We also contacted several professional associations in the training field, and conducted a review of related research. See Appendix A for a complete review of the state survey.

[3] 1997 ASTD Buyer's Guide & Consultant Directory, 1997 Consultants and Consulting Directory

The results show that the ETP fixed-fee system is unique in the training field.

State Training Survey

Fifteen states with state funded training programs believed to be similar to ETP's were contacted in order to review their funding policies and procedures.

We found that none of the states studied use the fixed-fee per participant model. Three different models were found through the survey; partial cost reimbursement, full cost reimbursement, and exclusive provider programs. The training costs are based on budgets submitted with proposals to the various states. Each state varied on what were considered eligible costs. Four states surveyed offered 50% wage reimbursement for on-the-job training (OJT).

- *Partial Cost Reimbursement*

The majority of the states surveyed operate on a partial cost reimbursement basis. This means that the state would pay a percentage of approved training costs. Costs eligible for reimbursement varied among states. The percentage eligible for reimbursement also varied. For example, in New Jersey, companies are reimbursed up to 60% of the eligible costs while in Iowa companies are reimbursed up to 75% of the eligible costs. Many states such as Kentucky and Ohio operate with a 50% reimbursement rate.

- *Full Cost Reimbursement*

A few states were found that reimburse up to 100% of the costs deemed eligible. This means that the full cost of training may be eligible for reimbursement. Missouri offers up to 100% reimbursement but generally only fully reimburses smaller projects. Oklahoma reimburses 100% while Michigan and Pennsylvania reimburse 100% for new hires but only partially cover retraining.

- *Exclusive Provider Programs*

Some states surveyed use a single public training provider. This means that the state is responsible for all training aspects through public training agencies. Alabama, Georgia, and South Carolina have unique programs where they handle the complete training process from recruitment to the actual training itself. Georgia has training facilities located across the state while Alabama tends to train on-site and South Carolina utilizes local community colleges.

Table 2 provides a brief summary of the survey results.

Table 2
Summary of State Survey

State	Method	Pay Tuition	Maximum Trainer Payment	Trainee Wages Covered	Any Maximum Caps
Alabama	Exclusive Provider	No	$17.50/hr	No	160 Maximum Training Hours/Group
Georgia	Exclusive Provider	No	No	No	No
Illinois	Partial Reimbursement 50%	Yes	No	Only New Businesses 50% OJT	Single Company Admin. Costs 1% Consortium < 15%
Indiana	Partial Reimbursement 50%	Yes	No	No	No
Iowa Industrial New Jobs	Full Reimbursement	Yes	No	Yes - OJT 50%	15.88% Admin. 10yr Tax Generation
Iowa Jobs Training	Partial Reimbursement 75%	Yes	No	No	15.88% Admin. $25K/Application
Kentucky	Partial Reimbursement 50%	No	$50/hr $15/hr - in-house	No	$10 K/Company/Year $250K/Consortium/Year
Michigan	New Hires - 100% Retraining - 75%	Yes	No	No	20% Admin.
Missouri	Full Reimbursement (Smaller Projects)	Yes	$50/hr	Yes - OJT 50%	$3K/Trainee
New Jersey	Partial Reimbursement 60%	Yes	No	Yes - OJT 50%	10% Admin.
Ohio	Partial Reimbursement 50%	Yes	$20/hr	No	$200K/Company/Year
Pennsylvania	New Hires - 100% Retraining - 70%	Yes	No	No	5% Admin. Except Post Secondary & Nonpublic 8% + 1% > $50K
South Carolina	Exclusive Provider	No	$35/hr	No	No

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Professional Associations

We contacted both the American Society for Training and Development (ASTD) and the Society of Human Resource Managers (SHRM) and conducted a complete search of published studies to locate any existing studies. The only relevant study that we found for estimating the hourly cost of training used employee wages as the basis[4]. The SHRM contact was unable to help us locate any relevant studies or useful comparative data.

Related Research

In addition, an extensive computerized search of Lexis-Nexis, ERIC, CARL/UnCover, Infotrac, and FirstSearch was undertaken. While our search unearthed many interesting articles related to training costs (such as comparisons of various training venues, gross company training expenditures, benefits/payoffs of training, and various training budgets). We found no information against which we could benchmark ETP's fees.

Training Manager Interviews

- *Percentage Breakdown of In-house Training Costs*

Our survey of in-house training providers produced some information on the breakdown of in-house training costs by general category. Most of the survey respondents cautioned that their training expenditures were substantially intermingled with other budgets so that a clear and accurate breakdown of training expenses was not readily available. They were persuaded to estimate, and the average percentage distribution of their estimated costs is reported in Table 3.

Among all respondents, the major cost category was salaries, accounting for an average of almost 80% of training costs. The magnitudes of the remaining cost categories varied somewhat between respondents based on their training activities. Travel expenses averaged 8.6% and were relatively higher for a training department that was responsible for training in company plants in other locations. Equipment expenditures accounted for an average of 5.4% of training costs. Specific equipment budgets were higher if computer programming, office automation, and CAD/CAM were major responsibilities of the department. Supplies and materials expenses averaged 3.9% of budgets and were an important category for some units that engaged in hands-on training in some manufacturing processes. Meals averaged 3.0% of training budgets and were a cost factor for some training departments that supplied meals to trainees.

Table 3 also reports a percentage breakdown of training costs based on *TRAINING* magazine's annual industry survey for 1996[5]. There were some basic differences between the information in *TRAINING* and our survey-generated information. Our respondents

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[4] Black, D. A., Berger, M. C., and Barron, J. *Job Training Approaches and Costs in Small and Large Firms*, U.S. Small Business Administration, Office of Advocacy, Washington, D. C., 1993.
[5] TRAINING, volume 33, number 10, (October, 1996) pp. 41 ff.

did not estimate "facilities and overhead" cost which is a cost category in *TRAINING's* data. In addition, our respondents did not incorporate the costs of outsourced training consultants or conference costs in their estimate of in-house training costs; these expenses are included in the *TRAINING* data. On the other hand, *TRAINING* did not break out training department travel to deliver training, and included meals for training participants under materials and supplies. To establish a comparable basis for the information, we adjusted the data reported in *TRAINING* to obtain comparable cost categories and reported the resulting percentage breakdowns in Table 3. The percentage breakdowns from our survey are fairly consistent with the percentage breakdown based on the adjusted *TRAINING* data. The salary and equipment percentages are very close, and if the meals category is added to materials and supplies in our survey then the "materials and supplies" percentages would be closer.

Table 3
Distribution of Costs

Cost Category	Survey Data	TRAINING Data
Salaries	79%	81.8%
Travel	8.7%	not separately reported
Equipment	5.4%	7.0%
Materials and Supplies	3.9%	11.2%
Meals	3.0%	not separately reported
TOTAL	**100.0%**	**100.0%**

- *In-house Costs Per Trainee Hour*

The in-house trainers that we surveyed had a particularly difficult time estimating the per-training-hour cost for their various types of in-house training. Company accounting procedures varied widely and did not provide a basis for an accurate estimate of cost per training hour in virtually every case. Overhead and facility costs were unknown or not allocated. Trainers' contact hours were known but trainers' preparation time was unknown in many cases (this was particularly true if personnel outside of the training department handled some of the training). Even if the trainer knew the contact time and the preparation time for the class itself, it was difficult to estimate the related support time (time required to assess the training needs, develop a training program, coordinate the classes, and assess the results). Some trainer time estimates included only material assembly and contact time. Other estimates included preparation time, and still others included some support activity time. Virtually none of the estimates included the value of time spent by support staff. To the extent that training materials were developed in-house, it was difficult to estimate the time involved and to allocate those costs over several iterations of the training class.

These complicating factors undermined our confidence that this survey could produce reliable and accurate cost estimates. Furthermore, it is not clear to us that a more expensive and time intensive survey would produce significantly better results. The

variations in the nature and structure of the training efforts, the variety of accounting methods, and the plethora of activities involved in and supporting training are all factors that militate against obtaining accurate estimates of in-house training costs. Nonetheless, the results of our survey are reported in Appendix B, and the reader is urged to exercise appropriate caution in applying the results.

2. Are ETP's fixed-fee rates reasonable in comparison with rates charged by other public and private entities?

To answer this question, we conducted surveys among California training providers to benchmark ETP's fees. Private training providers and both public and private higher education agencies who perform contract training were included in the California survey. In addition, we were able to benchmark ETP's fees against a representative group of similar projects in Illinois.

Survey of California Training Providers

Our survey of California training providers revealed an overall median cost -- across all types of training and all types of providers -- of $15.00 per trainee hour; this is higher than ETP's fixed fee of $13.00 per trainee hour. However, because of unusually "thin" distribution in the middle range, ETP's $13.00 fee actually came in at the 47.5% level which is very close to the 50% median of $15.00 per trainee hour. Our survey included 184 different observations on training costs across nine different types of training with 114 observations from private training providers and 70 observations from higher education based providers of contract training services. The survey revealed a range from $4.00 to $153.75 in costs per trainee hour for both private and education-based trainers as shown in Table 4. The range is inflated somewhat by some outlying observations, particularly on the high end; it narrowed to $6.67 per hour to $65.83 per hour if the three highest and lowest observations are dropped.

Table 4
Private and Higher Education Benchmark Prices

Type of Training	Measure	Overall Costs/Hour	Private Cost/Hour	Higher Ed Costs/Hour
All Types				
	Low	$ 4.00	$ 7.81	$ 4.00
	Median	$ 15.00	$ 20.83	$ 10.00
	Mean	$ 20.50	$ 26.70	$ 10.40
	High	$ 153.75	$ 153.75	$ 20.83
	Count	184	114	70
Customer Service				
	Low	$ 6.25	$ 7.81	$ 6.25
	Median	$ 12.50	$ 20.83	$ 9.75
	Mean	$ 21.57	$ 28.82	$ 9.70
	High	153.75	$ 153.75	$ 16.67
	Count	29	18	11
Management Skills				
	Low	$ 6.67	$ 10.00	$ 6.67
	Median	$ 14.29	$ 20.00	$ 8.75
	Mean	$ 19.62	$ 25.68	$ 9.15
	High	$ 123.00	$ 123.00	$ 12.50
	Count	30	19	11
Total Quality Management				
	Low	$ 7.14	$ 9.38	$ 7.14
	Median	$ 11.88	$ 17.14	$ 8.54
	Mean	$ 17.42	$ 20.80	$ 8.99
	High	$ 63.00	$ 63.00	$ 11.92
	Count	21	15	6
Project Management				
	Low	$ 6.67	$ 10.00	$ 6.67
	Median	$ 15.63	$ 20.83	$ 8.75
	Mean	$ 19.68	$ 22.63	$ 9.05
	High	$ 62.50	$ 62.50	$ 11.50
	Count	23	18	5

Type of Training	Measure	Overall Costs/Hour	Private Cost/Hour	Higher Ed Costs/Hour
Statistical Process Control				
	Low	$ 7.14	$ 10.00	$ 7.14
	Median	$ 12.75	$ 19.38	$ 11.25
	Mean	$ 20.42	$ 27.30	$ 11.25
	High	$ 63.00	$ 63.00	$ 17.50
	Count	14	8	6
Office Automation				
	Low	$ 6.67	$ 16.00	$ 6.67
	Median	$ 18.33	$ 25.00	$ 12.33
	Mean	$ 21.24	$ 28.90	$ 12.93
	High	$ 62.50	$ 62.50	$ 20.83
	Count	25	13	12
CAD/CAM				
	Low	$ 6.67	$ 12.50	$ 6.67
	Median	$ 20.00	$ 33.33	$ 11.17
	Mean	$ 24.35	$ 34.96	$ 11.96
	High	$ 65.83	$ 65.83	$ 20.00
	Count	13	7	6
Computer Programming				
	Low	$ 6.67	$ 11.43	$ 6.67
	Median	$ 20.64	$ 33.33	$ 12.16
	Mean	$ 26.55	$ 33.10	$ 12.14
	High	$ 77.75	$ 77.75	$ 20.00
	Count	16	11	5
Basic Skills: ESL, Math				
	Low	$ 4.00	$ 10.00	$ 4.00
	Median	$ 10.00	$ 15.63	$ 7.84
	Mean	$ 13.96	$ 23.04	$ 8.28
	High	$ 43.75	$ 43.75	$ 12.50
	Count	13	5	8

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Interestingly, the median costs of the two major types of training providers straddled the $13.00 ETP fixed fee, with private training providers median cost at $20.83 per hour and higher education providers median cost at $10.00 per hour. This means that, on average, ETP's fixed fee underpays private trainers and overpays higher-education trainers. However, this does not mean that the ETP fixed fee always underpays private trainers and always overpays higher-education trainers. Private trainers costs ranged from $7.81 to $153.75 per hour, while higher education training ranged from $4.00 to $20.83 per hour. The 114 observations on private trainers showed that their reported costs came in below ETP's $13.00 fixed fee in 23.6% of the cases, while the higher-education costs came in below $13.00 in 85.7% of the 70 reported cases.

The overall pattern of private-training costs being generally above the $13.00 mark and higher-education training costing below the $13.00 mark persisted throughout the nine different types of training that we sampled. Table 4 shows that for every type of training the higher-education training median cost was less than $13.00 per hour, and the median cost of the privately provided training was above it. Nonetheless, for every type of training surveyed but one, there were both private and higher-education trainers that reported less than the $13.00 fixed fee in cost of providing training. The lone exception of office automation had $16.00 per trainee hour as the lowest privately provided training cost. This means that for every type of training, the $13.00 fixed fee is higher than some private and some higher-education providers' cost of delivering the training except for privately provided office automation training.

The magnitude of the difference between private and higher-education training cost is noteworthy and persistent. As indicated above, the overall median for privately provided training of $20.83 was double that of higher-education training at $10.00 per hour[6]. The pattern of the median private costs of training being about double that of the higher-education costs persisted throughout the various types of training. In fact, in only one case out of nine were the median costs of the privately-provided training not more than double the higher-education provided median. The singular case was statistical process control training. In this case, the median private costs exceeded the higher-education median costs by 72%.

This large cost difference between private trainers and higher-education trainers may have several sources. One possible source is that, in pursing their mission, higher-education institutions do so much more education and training that they exploit their economies of scale and can provide this training at a much lower cost than a smaller (private) provider can. Educational institutions can spread the fixed cost of the facilities and equipment (and perhaps even their faculty and staff) across many more training activities and therefore are simply lower cost providers of this contract training. Others might argue that the educational institutions may be implicitly subsidizing this contract training by using existing facilities and equipment that already have been charged off against the institutions' main educational functions. The educational institutions are not charging the

[6] The mean of the privately provided training was even more than double at $26.70 compared $10.40 per hour for higher education based training. The greater departure of the mean from the median for privately provided training reflects the much more significant skewing of that distribution toward high costs than is present in the higher education based training.

full cost of training in this scenario. Of course, if this contract training occurs at off-times for educational activity then using these otherwise idle facilities may not incur any significant additional costs for the institution. Therefore, they would provide a low-cost alternative for this type of training.

Another possible source of the difference in cost between private and higher education training providers may be in the nature of the training itself. Educational institutions specialize in classroom education and training in which the people in a classroom are all subject to the same information, materials, and experience regardless of their particular backgrounds. To the extent that this educational format is used in contract training, then education-based training may be more likely to be the off-the-shelf variety of training and less likely to be customized to the particular backgrounds and situational needs of the trainees. Off-the-shelf training is less costly to provide than customized training because it does not require an appraisal of each trainee's current skills, work environment, or the development of a program that provides the training within the context of the trainee's job functions. To the extent that the private training providers produce the more expensive customized training and the higher education providers produce off-the-shelf training, the differences in cost could reflect differences in the quality of training offered.

The median cost of training varied significantly between types of training. In fact, the range in the median costs by type of training virtually matched the range by the type of provider. The lowest median cost per trainee hour was basic skills training at $10.00 per hour, while the highest was computer programming coming in a little over twice that amount at $20.54. The median cost for four types of training came in below ETP's $13.00 fixed fee. These were basic skills at $10.00 per hour, total quality management at $11.88, customer service at $12.50, and statistical process control at $12.75. The median cost for all other types were above the fixed fee. These were management skills at $14.29 per hour, project management at $15.63, office automation at $18.33, CAD/CAM at $20.00, and computer programming at $20.54.

The Illinois Industrial Training Program Analysis

- *Overview*

While no other state had a training program which paid on a per-trainee-hour basis, Illinois did provide us with cost data on a representative sample of 48 recent training classes from their Industrial Training Program. From these data, we were able to calculate the cost per trainee hour for the planned number of completers and the actual number of completers.

Complete data are presented in the following tables but overall the analysis shows that on average both the planned and actual costs per trainee hour are substantially above ETP's current fixed fee.

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Table 5
Illinois and ETP Fees Compared

Type of Trainee	ETP Fixed Fee In-house	ETP Fixed Fee Vendor Training	Illinois Median Cost per Planned Trainee Hour	Illinois Median Actual Cost per Trainee Hour
Retrainee	$10.00	$13.00	$18.00	$26.00
New Hire	$10.00	$14.00	$18.00	$26.00

It is important to note that Illinois only reimburses 50% of the costs so the money actually spent by the state was $9.00 per planned trainee hour and $13.00 per actual trainee hour. Even with holding state payments to only 50% of cost, Illinois ends up paying the same amount per actual trainee hour as ETP does.

A complete description of the Illinois program follows with details on how the per hour costs were calculated. Tables showing data on the 48 training classes are also included.

- *Illinois Program Description*

The Illinois training is structured differently from ETP, with a formal training component typically consisting of anywhere from 1 to 5 classes. Each class covers a distinct subject matter and usually runs from 8 to 24 hours in length. Therefore, the formal part of the Illinois training may be as short as 8 hours (one short class) or could involve up to 120 hours (5 long classes), with any individual's length of formal training dependent on how many classes the contract specified for that individual (in rare cases it may be longer than 120 hours). In contrast, ETP training requires at least 40 hours or more of formal training for all trainees and typically does not include a series of classes.

The Illinois Industrial Training Program is run largely in cooperation with the community college network with about half of the 52 community colleges participating. In fact, most of the trainees are covered by contracts with the intermediary institutions (largely community colleges) who survey surrounding businesses to establish the demand for training under the Program. Other training contracts with companies often involve co-contracts with either colleges or vendors to provide the training. Consequently, a high proportion of the Illinois training is done by community college or university staff or faculties, and a good share of the classes are held on campuses. In contrast, ETP training is mostly done at the company by private trainers hired by the company under ETP subcontracts or by in-house trainers. College staff or faculties do not do most of the training under ETP contracts.

In Illinois, the planned number of trainees is developed largely through surveys of the firms by the intermediary institution in most cases. This may be a community college surveying firms in the surrounding area, but it may also be a trade association surveying its members, or a large company surveying its suppliers. The results of the survey determine the planned number of trainees. This number is translated into a planned number of classes and a planned class size by the trainers (mostly community colleges). The planned number of trainees is the number submitted in the training contract proposal, along with the corresponding number of classes and class size. There usually is a

difference between the planned number of trainees and the number that actually complete the classes. The percentage of planned trainees that actually complete training is roughly comparable to ETP's completion rate for trainees. In Fiscal 1997, the Illinois Program planned to train 60,872 persons, including 8,046 newly hired employees and 52,826 retrainees whose skills were to be upgraded. A total of 47,607 persons, or 78.2% of the planned number, actually participated in training (including 84.8% of the planned new hires and 77.2% of the planned retrainee/upgrades).

In most cases, Illinois compensates the training agencies on the number of classes run rather than on the number of trainees who complete training as ETP does. In the Illinois Program, "estimated" or "planned" costs per class are submitted by the college or the contractor in concert with the training institution or trainer. These estimated costs are based on an expected or planned number of trainees coupled with either a cost per class (instructor, materials, and expenses) or a cost per trainee hour (like a tuition charge). Costs are estimated on a per class basis much more often than on a cost per-trainee-hour basis. For example, in one list of representative classes, 96 out of 97 classes were costed on a per class basis rather than on a per-trainee-hour basis. If the training costs are estimated on a per class basis, then Illinois pays the full estimated training costs for the class, regardless of the number of trainees that actually attend the class. (To control some of its costs, Illinois is currently instituting a minimum of six trainees per class.) Allowable training costs differ by where the class is held; classes held on campuses apparently allow only instruction and textbook costs while classes conducted at business sites may have instructor meals, lodging, and travel expenses. Compensation for classroom instruction is commonly listed in the $75 to $200 range per hour. Since these rates are paid for classroom time only, and instructors must work additional hours to prepare for class, the actual hourly rate is lower. Also, undoubtedly, some of the community colleges include compensation for space, equipment, and administration in the hourly rate. Other colleges have lower hourly rates and are more likely to have separate administrative and other charges in their contracts.

A major difference between the Illinois Program and ETP is that Illinois pays only 50% of the direct costs of formal training while ETP pays either the full direct costs or a fixed fee designed to cover the costs of training. This puts Illinois in line with most other surveyed states which reimburse anywhere from 50% to 75% of training costs (although some states do reimburse 100% of new hire training costs).

ETP and Illinois do have largely similar policies toward trainee wage reimbursement in their formal training programs. While ETP does not allow any type of trainee wage reimbursement in any part of its program, the Illinois program forbids it in multi-company contracts, and officially discourages wage reimbursement in its single company contracts. Administrative exceptions to this ban occur only in single company contracts which bring new jobs to Illinois, and then only some of the time.

In Illinois, any on-the-job training associated with the training programs is handled by a separate contract with the company wherein the State reimburses either 50% of the trainee's wages or 50% of the cost of the trainer (in a significant number of newly hired cases, Illinois will pay both). By contrast, ETP does not subsidize the trainee wages in OJT, but does pay $8 per trainee hour for this aspect in fixed-fee contracts to cover trainer costs. Depending on the Illinois trainee's wages, the State subsidy for OJT could be more

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or less than ETP's $8 per hour. In Illinois, the number of hours of on-the-job training varies among the types of training and is negotiated with each company involved.

In fiscal 1997, the Illinois Industrial Training Program encompassed 58 contracts, of which 10 were with multiple companies and 48 were with single companies. These contracts obligated $14,245,626 of State funds, of which $11,829,252, or 83.0% was actually spent. While the multiple-company contracts accounted for less than 20% of the contracts, they accounted for nearly half of the funds spent, at $5.5 million compared to about $6.3 million for the single company contracts. Individual contracts varied from just under $4,000 to nearly $3 million. The approved training contracts called for 1,263 companies to be involved in the training and, at the end of the year, 771 companies (61.0% of the planned number) had actually participated.

- *Representative Classes in the Illinois Program*

Illinois' median costs per trainee hour reported in Table 5 came from our analysis of 48 representative classes in the Illinois Program. There are two different sets of cost numbers for the Illinois program that provide a useful comparison with ETP cost per trainee hour. The first set is "planned" cost which is the cost per trainee hour of the class if it were run at its planned size with its planned cost. The second set is "actual" cost which is the cost per trainee hour of the class given the actual enrollment realized in the class. Corresponding to these two sets of cost numbers are the related "planned" and "actual" State costs per trainee hour that derive from Illinois' policy of only paying 50% of training costs. The differences between the planned and actual cost reflected the differences between planned and actual enrollment in the classes. Actual enrollment had an average of 70.1% of planned enrollment in the representative classes.

Table 6a Illinois' Planned Cost Per Trainee Hour

Course Description	Number of Individuals	Cumulative Percentage of Individuals	Planned Total Cost per Person per Hour	Actual Total Cost per Person per Hour	Planned State Cost per Person per Hour	Actual State Cost per Person per Hour	Cost per Class	Total Cost of Classes
World Class Manufacturing	18	0.7%	$ 9.95	$ 14.38	$ 4.98	$ 7.19	$ 2,070	$ 4,140
Time Management	34	2.0%	$ 11.54	$ 16.29	$ 5.77	$ 8.15	$ 1,108	$ 4,432
Customer Service	11	2.4%	$ 11.72	$ 15.98	$ 5.86	$ 7.99	$ 1,406	$ 1,406
Writing Skills	55	4.4%	$ 11.87	$ 16.83	$ 5.93	$ 8.41	$ 2,468	$ 14,808
Benchmarking	9	4.8%	$ 12.55	$ 18.13	$ 6.27	$ 9.06	$ 1,305	$ 1,305
Process Mapping	36	6.1%	$ 12.93	$ 18.68	$ 6.47	$ 9.34	$ 1,345	$ 5,380
Industrial Math & Measuring	84	9.3%	$ 13.86	$ 19.80	$ 6.93	$ 9.90	$ 3,327	$ 33,270
Geometric Tolerancing	210	17.2%	$ 15.08	$ 21.55	$ 7.54	$ 10.77	$ 2,896	$ 72,400
Blueprint Reading	112	21.4%	$ 15.28	$ 21.83	$ 7.64	$ 10.92	$ 2,445	$ 39,120
Leadership Skills	59	23.6%	$ 15.29	$ 21.77	$ 7.65	$ 10.88	$ 3,425	$ 20,550
Stress Management	29	24.7%	$ 16.03	$ 23.21	$ 8.01	$ 11.61	$ 1,795	$ 5,385
Effective Job Skills	36	26.1%	$ 16.38	$ 23.65	$ 8.19	$ 11.83	$ 1,703	$ 6,812
Statistical Process Control	67	28.6%	$ 16.84	$ 24.13	$ 8.42	$ 12.07	$ 3,234	$ 25,872
Effective Facilitation	42	30.2%	$ 16.90	$ 24.14	$ 8.45	$ 12.07	$ 4,055	$ 24,330
Decision Focus	53	32.2%	$ 17.88	$ 25.30	$ 8.94	$ 12.65	$ 4,291	$ 21,455
Customer Service II	21	33.0%	$ 17.88	$ 25.55	$ 8.94	$ 12.77	$ 2,146	$ 4,292
Computer Skills	630	56.7%	$ 18.06	$ 25.80	$ 9.03	$ 12.90	$ 1,445	$ 130,050
Presentation Skills	59	58.9%	$ 18.70	$ 26.62	$ 9.35	$ 13.31	$ 3,590	$ 25,130
Inventory Management	27	59.9%	$ 19.04	$ 27.50	$ 9.52	$ 13.75	$ 1,980	$ 5,940
Teaching Techniques	7	60.2%	$ 19.27	$ 27.53	$ 9.64	$ 13.76	$ 4,625	$ 4,625
Facilitator Skills	28	61.2%	$ 19.41	$ 27.72	$ 9.70	$ 13.86	$ 3,105	$ 12,420
Group Problem Solving	35	62.6%	$ 19.72	$ 28.17	$ 9.86	$ 14.08	$ 3,155	$ 15,775
Continuous Quality Improvement	17	63.2%	$ 19.78	$ 27.93	$ 9.89	$ 13.96	$ 3,798	$ 7,596
Advanced EDI	17	63.8%	$ 20.55	$ 29.01	$ 10.28	$ 14.51	$ 1,973	$ 3,946
Conflict Resolution: Team Operating Skills	50	65.7%	$ 20.63	$ 29.70	$ 10.31	$ 14.85	$ 1,980	$ 11,880
Preventing Discrimination and Sexual Harassment	18	66.4%	$ 20.72	$ 29.93	$ 10.36	$ 14.97	$ 2,155	$ 4,310
Job Instruction Workshop	25	67.3%	$ 20.78	$ 29.93	$ 10.39	$ 14.96	$ 1,995	$ 11,970
C.N.C. Programming	43	68.9%	$ 20.83	$ 29.55	$ 10.42	$ 14.78	$ 500	$ 30,500
Team Effectiveness II	17	69.6%	$ 21.44	$ 30.26	$ 10.72	$ 15.13	$ 2,058	$ 4,116
Team Effectiveness	8	69.9%	$ 21.44	$ 32.16	$ 10.72	$ 16.08	$ 2,058	$ 2,058
Design of Experiments	42	71.5%	$ 22.35	$ 31.92	$ 11.17	$ 15.96	$ 8,045	$ 32,180
Creative Focus	63	73.8%	$ 23.22	$ 33.17	$ 11.61	$ 16.58	$ 2,786	$ 16,716
Cost / Price Analysis	28	74.9%	$ 23.31	$ 33.30	$ 11.66	$ 16.65	$ 7,460	$ 14,920
Finance for Non-Financial Managers	21	75.7%	$ 23.39	$ 33.41	$ 11.69	$ 16.71	$ 5,613	$ 11,226
Developing Employees	53	77.7%	$ 24.18	$ 34.22	$ 12.09	$ 17.11	$ 5,804	$ 29,020
Developing High Performance Teams	53	79.7%	$ 24.18	$ 34.22	$ 12.09	$ 17.11	$ 5,804	$ 29,020
Developing Self Leadership	53	81.7%	$ 24.18	$ 34.22	$ 12.09	$ 17.11	$ 5,804	$ 29,020
Developing Communication for Increased Collaboration	84	84.8%	$ 24.18	$ 34.55	$ 12.09	$ 17.27	$ 5,804	$ 46,432
Business Report Writing	46	86.6%	$ 24.65	$ 34.83	$ 12.32	$ 17.42	$ 5,127	$ 25,635
Cash Flow Analysis	11	87.0%	$ 24.98	$ 34.07	$ 12.49	$ 17.03	$ 2,998	$ 2,998
Cycle Time Reduction	36	88.3%	$ 25.53	$ 36.88	$ 12.76	$ 18.44	$ 5,310	$ 21,240
Project Management	63	90.7%	$ 30.54	$ 43.63	$ 15.27	$ 21.81	$ 8,795	$ 43,975
Activity Based Costing	21	91.5%	$ 35.73	$ 51.05	$ 17.87	$ 25.52	$ 4,288	$ 8,576
Apples & Oranges	67	94.0%	$ 37.20	$ 53.29	$ 18.60	$ 26.65	$ 4,761	$ 28,566
Working in a Changing Environment	46	95.7%	$ 39.10	$ 55.24	$ 19.55	$ 27.62	$ 4,066	$ 20,330
Win/Win Negotiations	56	97.9%	$ 41.88	$ 59.83	$ 20.94	$ 29.91	$13,401	$ 53,604
Interviewing Techniques	56	100.0%	$ 46.25	$ 66.07	$ 23.13	$ 33.04	$ 3,700	$ 29,600
Needs Assessment	1	100.0%	$ 158.75	$ 158.75	$ 79.38	$ 79.38	$ 1,270	$ 1,270
Totals	2657							
			State share		Total Instruction Costs		91.4%	$ 999,608
Average cost per trainee:			$ 11.20		Total Administration Costs		8.6%	$ 94,220
			$ 15.97		Total Program Cost		100.0%	$1,093,828

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Table 6b Illinois' Actual Cost Per Trainee Hour

Course Description	Number of Individuals	Cumulative Percentage of Individuals	Planned Total Cost per Person per Hour	Actual Total Cost per Person per Hour	Planned State Cost per Person per Hour	Actual State Cost per Person per Hour	Cost per Class	Total Cost of Classes
World Class Manufacturing	18	0.7%	$ 9.95	$ 14.38	$ 4.98	$ 7.19	$ 2,070	$ 4,140
Customer Service	11	1.1%	$ 11.72	$ 15.98	$ 5.86	$ 7.99	$ 1,406	$ 1,406
Time Management	34	2.4%	$ 11.54	$ 16.29	$ 5.77	$ 8.15	$ 1,108	$ 4,432
Writing Skills	55	4.4%	$ 11.87	$ 16.83	$ 5.93	$ 8.41	$ 2,468	$ 14,808
Benchmarking	9	4.8%	$ 12.55	$ 18.13	$ 6.27	$ 9.06	$ 1,305	$ 1,305
Process Mapping	36	6.1%	$ 12.93	$ 18.68	$ 6.47	$ 9.34	$ 1,345	$ 5,380
Industrial Math & Measuring	84	9.3%	$ 13.86	$ 19.80	$ 6.93	$ 9.90	$ 3,327	$ 33,270
Geometric Tolerancing	210	17.2%	$ 15.08	$ 21.55	$ 7.54	$ 10.77	$ 2,896	$ 72,400
Leadership Skills	59	19.4%	$ 15.29	$ 21.77	$ 7.65	$ 10.88	$ 3,425	$ 20,550
Blueprint Reading	112	23.6%	$ 15.28	$ 21.83	$ 7.64	$ 10.92	$ 2,445	$ 39,120
Stress Management	29	24.7%	$ 16.03	$ 23.21	$ 8.01	$ 11.61	$ 1,795	$ 5,385
Effective Job Skills	36	26.1%	$ 16.38	$ 23.65	$ 8.19	$ 11.83	$ 1,703	$ 6,812
Statistical Process Control	67	28.6%	$ 16.84	$ 24.13	$ 8.42	$ 12.07	$ 3,234	$ 25,872
Effective Facilitation	42	30.2%	$ 16.90	$ 24.14	$ 8.45	$ 12.07	$ 4,055	$ 24,330
Decision Focus	53	32.2%	$ 17.88	$ 25.30	$ 8.94	$ 12.65	$ 4,291	$ 21,455
Customer Service II	21	33.0%	$ 17.88	$ 25.55	$ 8.94	$ 12.77	$ 2,146	$ 4,292
Computer Skills	630	56.7%	$ 18.06	$ 25.80	$ 9.03	$ 12.90	$ 1,445	$ 130,050
Presentation Skills	59	58.9%	$ 18.70	$ 26.62	$ 9.35	$ 13.31	$ 3,590	$ 25,130
Inventory Management	27	59.9%	$ 19.04	$ 27.50	$ 9.52	$ 13.75	$ 1,980	$ 5,940
Teaching Techniques	7	60.2%	$ 19.27	$ 27.53	$ 9.64	$ 13.76	$ 4,625	$ 4,625
Facilitator Skills	28	61.2%	$ 19.41	$ 27.72	$ 9.70	$ 13.86	$ 3,105	$ 12,420
Continuous Quality Improvement	17	61.9%	$ 19.78	$ 27.93	$ 9.89	$ 13.96	$ 3,798	$ 7,596
Group Problem Solving	35	63.2%	$ 19.72	$ 28.17	$ 9.86	$ 14.08	$ 3,155	$ 15,775
Advanced EDI	17	63.8%	$ 20.55	$ 29.01	$ 10.28	$ 14.51	$ 1,973	$ 3,946
C.N.C. Programming	43	65.4%	$ 20.83	$ 29.55	$ 10.42	$ 14.78	$ 500	$ 30,500
Conflict Resolution: Team Operating Skills	50	67.3%	$ 20.63	$ 29.70	$ 10.31	$ 14.85	$ 1,980	$ 11,880
Job Instruction Workshop	25	68.3%	$ 20.78	$ 29.93	$ 10.39	$ 14.96	$ 1,995	$ 11,970
Preventing Discrimination and Sexual Harassment	18	68.9%	$ 20.72	$ 29.93	$ 10.36	$ 14.97	$ 2,155	$ 4,310
Team Effectiveness II	17	69.6%	$ 21.44	$ 30.26	$ 10.72	$ 15.13	$ 2,058	$ 4,116
Design of Experiments	42	71.2%	$ 22.35	$ 31.92	$ 11.17	$ 15.96	$ 8,045	$ 32,180
Team Effectiveness	8	71.5%	$ 21.44	$ 32.16	$ 10.72	$ 16.08	$ 2,058	$ 2,058
Creative Focus	63	73.8%	$ 23.22	$ 33.17	$ 11.61	$ 16.58	$ 2,786	$ 16,716
Cost / Price Analysis	28	74.9%	$ 23.31	$ 33.30	$ 11.66	$ 16.65	$ 7,460	$ 14,920
Finance for Non-Financial Managers	21	75.7%	$ 23.39	$ 33.41	$ 11.69	$ 16.71	$ 5,613	$ 11,226
Cash Flow Analysis	11	76.1%	$ 24.98	$ 34.07	$ 12.49	$ 17.03	$ 2,998	$ 2,998
Developing Employees	53	78.1%	$ 24.18	$ 34.22	$ 12.09	$ 17.11	$ 5,804	$ 29,020
Developing High Performance Teams	53	80.1%	$ 24.18	$ 34.22	$ 12.09	$ 17.11	$ 5,804	$ 29,020
Developing Self Leadership	53	82.1%	$ 24.18	$ 34.22	$ 12.09	$ 17.11	$ 5,804	$ 29,020
Developing Communication for Increased Collaboration	84	85.2%	$ 24.18	$ 34.55	$ 12.09	$ 17.27	$ 5,804	$ 46,432
Business Report Writing	46	87.0%	$ 24.65	$ 34.83	$ 12.32	$ 17.42	$ 5,127	$ 25,635
Cycle Time Reduction	36	88.3%	$ 25.53	$ 36.88	$ 12.76	$ 18.44	$ 5,310	$ 21,240
Project Management	63	90.7%	$ 30.54	$ 43.63	$ 15.27	$ 21.81	$ 8,795	$ 43,975
Activity Based Costing	21	91.5%	$ 35.73	$ 51.05	$ 17.87	$ 25.52	$ 4,288	$ 8,576
Apples & Oranges	67	94.0%	$ 37.20	$ 53.29	$ 18.60	$ 26.65	$ 4,761	$ 28,566
Working in a Changing Environment	46	95.7%	$ 39.10	$ 55.24	$ 19.55	$ 27.62	$ 4,066	$ 20,330
Win/Win Negotiations	56	97.9%	$ 41.88	$ 59.83	$ 20.94	$ 29.91	$13,401	$ 53,604
Interviewing Techniques	56	100.0%	$ 46.25	$ 66.07	$ 23.13	$ 33.04	$ 3,700	$ 29,600
Needs Assessment	1	100.0%	$ 158.75	$ 158.75	$ 79.38	$ 79.38	$ 1,270	$ 1,270
Totals	2657							
			State share		Total Instruction Costs		91.4%	$ 999,608
Average cost per trainee			$ 11.20		Total Administration Costs		8.6%	$ 94,220
			$ 15.97		Total Program Cost		100.0%	$1,093,828

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The results of our cost analysis are reported in Table 6a and 6b. The two Tables present the same information on the listed classes, but ordered differently. Table 6a lists the classes in ascending order of the planned cost per trainee hour. Table 6b lists the classes in ascending order by the actual costs per trainee hour. The Tables also report the number of trainees and the cumulative percentage of individuals trained in the various courses. For the reader's convenience the cost series by which the classes are ordered in the Table appears in bold typeface.

The median "planned" cost of training was $18 per trainee hour in Illinois as Table 6a reports. In the representative classes, planned cost ranged from a low of $9.95 to around $50 per trainee hour (with one larger cost). Correspondingly, the Illinois' share of these planned costs ranged from $4.98 to around $25 per trainee hour with median State costs coming in at $9 per trainee hour. The progressive ordering of these classes yielded planned costs below $16 per hour for the lowest-cost 25% of the trainees and planned costs more than $23 per hour for the highest-cost 25% of trainees.

The median of the actual cost of training was just under $26 per trainee hour with the State's median cost at just under $13 per trainee hour as Table 6b shows. The actual costs of training ranged from $14.38 per trainee hour to over $66 per trainee hour, and the State paid 50% of that cost ($7.19 to over $33 per trainee hour). The ranked distribution of these classes yielded an actual cost up to $23 per trainee hour for the lowest cost 25% of the trainees and an actual cost above $33 per trainee hour for the highest cost 25% of the trainees.

A major difference between ETP and Illinois Program is implied by the difference between planned and actual costs in these tables. Illinois essentially paid for non-completers by running the classes at less than planned levels but paid the amount based on the estimated or planned enrollment. This practice increased the cost of a trainee completing a class by 43%, from a planned average expenditure of $288 per trainee to an actual average expenditure of $412 per trainee. In contrast, ETP only pays for trainees who complete training and who are retained for 90 days in a training-related job.

Another interesting cost comparison between ETP and the Illinois Program involves direct training versus administrative costs. In Illinois, direct training costs compose 91.4% of the program costs while contract administrative costs account for the remaining 8.6%. This breakdown in training versus administrative costs is similar to ETP where recent contract information shows training costs at 88.9% and administrative costs at 11.1%. The lower percentage of administrative costs in Illinois is probably attributable to their policy that strictly limits administrative costs in single-company contracts to reimbursement for the audit of the grant funds. The strict limitation on administrative funds in single-company contracts are:

- No administrative costs are allowed in single-company contracts that total less than $100,000.

- A maximum of $2,000 in administrative costs are allowed in single-company contracts up to $200,000,
- A maximum of 1% of grant funds are allowed for contracts in excess of $200,000.

3. Is it reasonable to use one fee for both vendor and in-house training providers?

Our analysis of this question is based on interviews with training managers, knowledge gained through the earlier study of training subcontractors and consultants, and basic economic reasoning.

Given the current situation, we do not believe the two-price system with $13 per trainee-hour fee for vendor training and a $10 fee for in-house training is the best policy. ETP's experience with budgeted projects showed vendor training was substantially more costly than in-house training. This difference was the rationale for a two-tiered fee.

However, this system creates an unintended incentive in that it encourages contractors to use the more expensive vendors when in-house trainers may be able to do the same training cheaper. While we can't estimate how often this has happened, the incentive is clear. For example, a company may be able to provide an in-house training program in TQM for $10.00 per trainee hour while the cost of vendor training may be $11.00 per trainee hour. The company could realize surplus revenue of $2.00 per trainee hour by hiring an outside vendor.

Thus, we conclude that a single rate would be more efficient and more cost-effective, and it would provide an incentive for employers to train in the most economical manner rather than prefer outside vendors.

On the other hand, the separate fees for classroom and SOST make sense in that it is well established that SOST training is different from classroom training and the costs of SOST are lower. Similarly, training new-hires, who are new to a company and need more intensive training and socialization to the organization, often requires smaller classes, and thus, a higher fee seems reasonable in our view.

We believe that the current class size maximums of 20 for retrainee classes and 10 for new hires are reasonable given the types of skills taught and the backgrounds of the individuals being trained.

Conclusions

Before moving on to recommendations we want to review the key conclusions that can be drawn from the research.

1. We found no identical fixed-fee models for state-training programs, but it appears that ETP's fixed fee is about half the cost of training in a similar Illinois training program.

Our research into a number of other state funded training programs found a variety of cost reimbursement models but no other fixed-fee-funding models. We were able to get data on one major state training program, the Illinois Industrial Training Program, from which we could make a price comparison. The results reveal that ETP's fees for classroom training was significantly below both the planned cost ($18 per classroom hour) and actual cost per completer hour ($26 per classroom hour).

2. ETP's fixed fee is below the median price for the larger training market.

In benchmarking ETP's fee against the market for training services provided by both higher-education institutions and private-training providers, we found that ETP's per hour classroom fee for vendor training of $13 was below the market median of $15. Yet due to the nature of the market, the ETP fee was in the 47th percentile indicating that despite the two-dollar gap it is quite close to the median.

3. ETP's fixed fee is higher than the median market price in some areas of training and below it in others.

In benchmarking ETP's fee against the market for training services in specific areas, we found it was substantially lower than the market median in several areas, for example, office automation $18.33, CAD/CAM $20.00, and computer programming $20.54. Conversely the ETP fee was slightly higher than the median in other areas, for example, customer service $12.50, TQM $11.88, and basic skills $10.00.

4. ETP's fixed fee is generally lower than fees charged by private for-profit training providers and generally higher than fees charged by higher-education institutions that provide contract training services.

In comparison with ETP's fixed fee of $13 per instructional hour for vendor training, the median fee for all types of private-training provider training was $20.83. The median fee for higher-education provided training was only $10, less than half of the private fee and substantially below ETP's fee. This may account, in part, for the growing participation of community colleges and other higher-education institutions in ETP.

Recommendations

The price setting decisions which the Panel now confronts are judgments. While these judgments must be based on the best available data they will ultimately require that the Panel trade off a wide variety of factors. Factors that must be considered include staff efficiency, regulatory burden imposed on contractors, equity among various types of employers, the value of different incentives, and the risk of the system being abused. For example, a relatively low price reduces the chance of money being misspent but may discourage valuable hard skills training.

In our view, the Panel should consider five strategies for setting training fees. We describe each of them below with pro and con arguments. After reviewing the arguments, we recommend a new fee policy which we believe is the best alternative. It is important to note that all strategies assume the current class size limits will remain in place.

1. The Panel could keep the existing dual-fee system and not change anything.

It is always possible to make no change. The current system is widely understood and works, in that it has achieved substantial administrative efficiencies over the old budget system. The current price is somewhat low in relation to the overall market, minimizing the risk of overpayments.

As we noted earlier, the current system does create an incentive to outsource training to more expensive vendors. It also creates a disincentive for the creation of higher-cost hard skill projects, and it creates an incentive to drive down the quality of training so vendors can achieve a larger profit under the fixed fee.

A variation on the no change strategy is to simply increase the fees slightly to the market's median price of $15.00 to mitigate some of the problems caused by offering a relatively low fee. Paying the $15.00 median cost would mean that the Panel would be overpaying about half the time and underpaying the other half. It is important to note that the current fee is very close to the median, the 47th percentile. Because of the nature of the price distribution it is still two dollars below the median.

2. The Panel could establish a single price for retrainee classroom training, and a second price for retrainee SOST, and similar somewhat higher prices for new-hire training.

This strategy eliminates the separate prices for in-house and vendor training and in our view creates the correct incentives for employers. The question then is: where should the price be set? There is no perfect single price. Prices that are relatively low in comparison with the overall market will underpay for most types of training and overpay for a few types of training. It may well drive projects away from hard-skills training and into lower-cost, soft-skills training. To the degree that consultants and subcontractors seeking quick turnaround projects drive the system, this will be a significant problem. Relatively

high prices conversely create the risk that ETP will overpay for a larger portion of training, but it will encourage more highly-priced, hard-skills training.

Our data show a wide-range of private sector prices. Currently, both ETP prices are low relative to the existing market. One strategy for setting the price is to simply pick the median of the combined public and private market, which would be $15.00 per trainee hour, assuming that the risk of under and overpaying would be equal. A second approach is to pick a relatively low position in the distribution, say the 25th percentile, which would be $10.00, or the 33rd percentile which would be $11.50 per trainee hour, reasoning that this would minimize overpayments. The disincentive for higher-cost training created by this policy could be mitigated by encouraging more budgeted projects for higher-cost, hard-skills training.

3. The Panel could establish separate fixed fees for the most common skill areas based on market prices.

Our results show that training prices vary significantly by field. For example, the median cost of an hour of CAD/CAM training is $20 compared to an hour of TQM training which only costs $11.88. To remove some of the incentive problems created by a single fixed fee, the Panel could establish a range of prices for different categories of training. Table 7 below shows the range of fees that could be established by taking the median price for each of the nine types of training studied and setting the fee there. Once again, separate lower rates would be retained for SOST training.

Table 7
Median Training Fees

Type of Training	Fee (Based on Median Reported Price)
Customer Service	$12.50
Management Skills	$14.29
Total Quality Management	$11.88
Project Management	$15.63
Statistical Process Control	$12.75
Office Automation	$18.33
CAD/CAM	$20.00
Computer Programming	$20.54
Basic Skills (ESL, Math)	$10.00

This strategy offers the advantage of moving ETP closer to its objective of reimbursing the employer for the full cost of training. It also reduces the incentive to move away from higher-cost, hard-skills training, by paying more for that type of training.

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Conversely, the added complexity will mean an increased administrative burden for staff. The Panel used a similar multiple pricing system in the past but it was considered too cumbersome administratively and too burdensome for contractors and was dropped. This strategy also creates an incentive for employers, subcontractors and consultants to "game" the system by trying to get projects classified into higher-paying categories, as the staff is aware from its earlier experience. It may also discourage potentially valuable training in the lower-paid categories.

4. The Panel could establish a two-tiered price, one higher price for customized training and a second lower price for uncustomized training.

This strategy deals with a major objection to the current fee structure, which is that it creates a powerful incentive for vendors to drive down quality to achieve larger profits. In our experience, this is done principally by substituting generic, off-the-shelf training curricula and materials for careful needs assessment, and customized curricula and materials. Paying more for customized training would create an incentive to improve the quality of training.

In truly customized training, the trainer and employer assess each individual trainee, identify specific skill deficiencies related to the job, and design training directly related to the job which will eliminate the deficiencies. Instruction includes many examples from the trainee's work environment. Trainees have an opportunity to solve work-related problems in the class setting and practice their new skills through SOST on the work site.

Conversely, off-the-shelf training takes standard generic training materials and gives them to all trainees regardless of their current skill level. Training activities and examples are unrelated to the specifics of the trainee's job. Overall, generic training is less likely to lead to the transfer of learning from the classroom to work, and hence less likely to increase productivity and earnings.

Obviously, it is much less expensive to provide generic training since the time it takes to customize material and conduct a complete needs assessment is avoided.

The cost of this approach is, once again, increased administrative complexity, and gaming of the system by some subcontractors and consultants. ETP staff would have to be trained in how to recognize generic and customized training in an efficient and reliable manner. The system would provide a powerful incentive for subcontractors and consultants to make training programs appear to be customized when they were in fact generic.

5. The Panel could end the fixed-fee system and go back to approving individual budgets for each project.

The advantage of this approach is it offers the chance that each project would be reimbursed at the level of its actual costs thus reducing the risk of both over and underpaying.

The cost of this approach is that it substantially increases administrative costs and complexity. Further, it does not guarantee that projects will not be over-funded, because the effectiveness of the system will rely on the ability of the Panel to train staff to a point where they can quickly and accurately evaluate budgets from a host of training areas and a wide-range of industries. It is important to note that the price data presented here could provide a means to benchmark proposed budgets to see if the amount requested is within reason given the type of training provided.

Recommendation

The Panel should establish a two-tiered price, a higher price for customized training and a second lower price for uncustomized training.

Our analysis of the five alternatives convinces us that a new fee structure with a two-tiered fee, a higher price for customized training and a second lower price for uncustomized training is the best alternative. This fee structure allows the Panel to keep the administrative efficiencies achieved by the current fixed fee and creates an incentive for contractors to provide higher-valued, customized training. By paying less for training which is not customized, ETP addresses a critical problem with the current fixed-fee system which is that it creates an incentive to drive down quality to increase profits. It also sends a powerful message that the Panel values customized, high-quality training.

Switching to a new two-tiered system will require the following steps:

1. Establish clear definitions of what is and what is not customized training.
2. Establish a custom-training and generic-training fee based on price data collected by this study.
3. Train staff to evaluate proposals to identify customized and generic training.
4. Conduct a communications campaign to inform employers, subcontractors and consultants about the new fee structures and their underlying standards.
5. Evaluate the impact of the new fee structure one year after implementation.

We believe that these steps can be accomplished fairly easily. We anticipate there will be some resistance from staff who are hesitant to exercise judgment in evaluating project proposals, even with clear guidelines. We also anticipate that the Panel will have to referee some disputes between staff and contractors who object to having their project classified as generic training and thus receive the lower fee. Overall, we believe the benefits of the system far outweigh its drawbacks.

Appendix A:

Summary of State Survey

State Summaries

A brief summary of the studied state programs is given below. Included are the programs' goals, training eligibility requirements, and any maximum or minimum requirements the programs may utilize.

Alabama

The Alabama Industrial Training Program was started in 1971 to provide skilled and motivated employees for Alabama. The program addresses pre-employment, start-up, upgrade, and on-the-job training. It recruits, assesses, and trains potential employees; develops and produces training materials; locates facilities; and delivers customized services.

All industries are considered and evaluations are based on business need. Training categories include; leadership fundamentals, TQM, JIT, ISO 9000, SPC, reengineering, industrial maintenance, service skills, CAD/CAM, basic manufacturing skills, machine shop skills, fabrication, and assembly.

The program has trainers for management skills on payroll but contracts hard skills instructors. Trainers' hourly rates vary from $12-$17.50 (averaging $15.00 per hour). Many of the trainers work at the company doing the training and "moonlight." A maximum of 160 hours of training per group is allowed.

Georgia

Georgia Quickstart began in 1967-68 as an incentive program for companies to expand in or move to Georgia. The program focuses on manufacturing and service. Retail and health-care companies are ineligible.

A training assessment is used and each project is unique. The program produces all of the training materials necessary and supplies trainers. The program focuses on new and expanding companies and is used as an incentive for companies considering moving into the state.

Consultants are paid hourly and rates are determined on an individual basis. The program has a core of contractors upon whom they rely. Approximately 80% of the contractors have been with the program for 3-5 years.

The program has been very successful and is continuously growing. In FY 96-97, approximately 30,000 employees from 250 companies were trained.

Illinois

Any job classification may be included in the training program. Any individual employer which is locating, expanding, or has a facility(ies) in the state are able to apply for an Industrial Training Program grant if the company is undertaking one or more of the eligible training activities. Eligible applicants for multi-company, training-project funding include: business and industry associations, institutions of secondary or higher education, large manufacturers for supplier network companies, Federal Job Training Partnership Act administrative entities or grant recipients, labor organizations, and strategic business partnerships.

Eligible training includes: necessary training due to new or changing technologies or processes being introduced into the workplace; implementation of TQM or other improvement systems in the workplace; job-linked training that offers new or additional skills; necessary training to establish, maintain, or expand into new export markets; training in conjunction with new or additional product lines, training related to new machinery or equipment; and basic and/or remedial training as a prerequisite for other vocational or technical skills. For multi-company projects, job skills assessment and training related to regulatory compliance issues mandated for the workplace are also eligible.

Approved costs are reimbursed at 50%. Trainee wages are covered but only when attracting new companies to the state. Administrative costs for a single company are 1% and 15% for multi-companies. Curriculum development costs are reimbursed if the curriculum will benefit multiple Illinois employers.

Indiana

Indiana's Training 2000 Program is designed to provide financial assistance to new and expanding industries committed to training their workforce. Eligible companies include: manufacturing companies, distribution centers, consortia of manufacturing companies or distribution centers, and regional headquarters or back offices which demonstrate that a significant portion of its business involves transactions with out-of-state entities. Basic skills, transferable skills, company-specific skills, and quality-assurance skills are covered.

Approved costs are reimbursed at 50%. For retraining purposes, projects are capped at $200,000.

Iowa

Iowa has two programs; the Industrial New Jobs Program and the Iowa Jobs Training Program. The programs began in the mid 1980s and have evolved in response to the needs of Iowa's workforce, business, and communities. The state continues to improve

accessibility and availability, striving to increase program efficiency and cost effectiveness.

The purpose of the Industrial New Jobs Program is to address the workforce development needs of new employees of a company that is expanding in or relocating to Iowa. Companies that are creating new jobs and are involved in manufacturing, processing, assembling products, warehousing, wholesaling, or conducting research and development are eligible. Retail, health, and professional service businesses do not qualify. This program utilizes 15 community colleges and is 77% manufacturing.

The purpose of the Iowa Jobs Training Program is to foster the growth and competitiveness of Iowa's workforce and industry by ensuring that the workforce has the skills and expertise to compete with any workforce outside the state of Iowa. Services include: vocational and skill assessment testing; adult basic education; job-related counseling; cost of company, college, or contracted trainer or training services; and training-related materials.

The maximum project amount approved within the Industrial New Jobs Program is the 10 year tax generation the company will accrue. This program also offers 50% reimbursement for trainee wages during on-the-job training. Within the Iowa Jobs Training Program each application is limited to $25,000. This program reimburses up to 75% of approved costs. Administrative costs are capped at 15.88%.

Kentucky

The Bluegrass State Skills Corp. (BSSC) was established in 1984 by the General Assembly of the Commonwealth of Kentucky as an independent de jure corporation to stimulate economic development through programs of skills training to meet the needs of business and industry. The BSSC works with business and industry and Kentucky educational institutions to establish programs of skills training. The purpose of the BSSC is to improve and promote employment opportunities for the citizens of the Commonwealth through grants for skills training programs.

BSSC has the following four main functions: 1) to administer and fund Kentucky's industry-specific training efforts through grants approved by the Board of Directors of the BSSC, 2) to act as a broker, by coordinating the resources of providers of skills training and employment services, 3) to facilitate and fund new training programs designed to meet unfilled training needs in the state, and 4) to administer any special state appropriations for industry-specific training.

Manufacturing companies, public or non-profit hospitals, and non-manufacturing companies which have an "economic development impact" are eligible. Economic development impact is determined if the company could easily be located outside of Kentucky, and a majority of the firm's income is generated from outside of the state.

Training categories include: pre-employment skills training and applicant assessment; entry-level skills training; skills upgrade training; occupational upgrade training; capacity building programs; train-the-trainer; culture, customs, and language; workplace essential skills training; and mandatory/safety training.

The maximum amount awarded to an individual company is $100,000/year. Consortiums are allowed up to $250,00/year. The program reimburses 50% of approved costs. In-house trainers receive $15/hour maximum while outside trainers are allotted up to $50/hour.

Michigan

The Economic Development and Job Training Program was founded in 1991 to increase the competitiveness of Michigan's workforce and to attract new businesses to the state. The program covers all approved costs except it requires a 25% contribution by companies for retraining.

Companies that meet the following criteria are eligible to receive education and training services funded by this program: any Michigan business which agrees to create jobs or retain jobs at risk of being lost, paying $7 per hour or more, in manufacturing, research and development, warehousing and distribution; a world headquarters; or a business which exports goods and services outside Michigan.

Missouri

The Missouri Customized Training Program began in 1983. Its purpose is to increase and improve the state's workforce by helping new or expanding businesses recruit and train new workers for newly created jobs and helping retrain existing workers as a result of sizable new capital investment, expansion into new products and services, or to upgrade quality and/or increase productivity.

Missouri Customized Training involves skill training in a classroom setting, on-the-job training, task-oriented training, or a combination. Programs are designed to meet specific training objectives.

All businesses with a sound credit rating currently located in or locating to Missouri engaged in interstate or intrastate commerce for the purpose of manufacturing, processing, or assembling products are eligible. Companies that conduct research and development or provide services in interstate commerce are also eligible. Retail businesses, health and professional services do not qualify for the program.

The program funds up to 100% but generally only fully funds smaller projects. A maximum of $50 per hour for trainers is allotted. The program also offers to pay 50% for trainees wages during on-the-job training. Training expenditure per trainee is limited to $3,000.

New Jersey

The New Jersey Customized Training Program is a component of the Workforce Development Partnership Program which was authorized by the 1992 New Jersey Employment and Workforce Development Act. Approximately 40% of the program is allocated to customized training.

The objective of the program is to enhance the creation and retention of high wage, high skill jobs in New Jersey through comprehensive workforce training and to assist in building a highly skilled, productive, globally competitive workforce.

Individual employers; an employer organization, labor organization, or community based organization; or a consortium made up of one or more educational institutions and one or more eligible individual employer or organization that seeks to provide training in labor demand occupations in a particular industry are eligible.

The proposed training program must address one of the following needs: creation, retention, or upgrading labor demand occupations; prevention of job losses as a result of a potential facility closing, national or international competition, or changing technology; or creation of jobs as a result of a company relocating to New Jersey or starting a business in the state.

Training activity can take the form of on-the-job training and/or classroom training. Approved training includes ISO 9000, computer and information science, ESL, TQM, industrial production technologies quality control and safety technologies, and precision production technologies.

The program requires a minimum contribution of 40% from the company and will pay 50% of trainees wages for on-the-job training. Administrative costs are limited to 10% of the grant.

Ohio

The Ohio Industrial Training Program is designed to provide financial assistance and resources for customized training involving employees of new and expanding Ohio manufacturing businesses and will consider other industries creating a large number of new jobs. The program stresses training for newly created jobs but recognizes the importance of retraining and upgrading the skills of existing employees in an effort to retain present Ohio jobs.

Training categories should be production-oriented: technical skills, total quality, ISO 9000, etc. are standard training areas. The program reimburses 50% of approved costs. There is a maximum grant of $200,000/year per company. The program will reimburse trainers up to $20/hour.

Pennsylvania

The Customized Job Training Program which was enacted into law in 1985 is a major component in the effort to establish job training as a key element of economic development in Pennsylvania. The program encourages business expansion as well as the retention of existing private companies whose competitive viability can be impacted through upgrade training. It also encourages new business start-ups and relocation to the state. Areas of the commonwealth that are especially economically distressed receive more attention than most with regard to potential relocation. The training ensures that Pennsylvanians develop skills which are consistent with current and projected employer demand. The program also enables residents to obtain initial employment and to make the transitions in skills, occupations, and places of employment which are increasingly a feature of the state's economy.

The program's objective is to promote opportunities for people, private companies, and distressed areas. Point-of-sale retail companies are excluded. The program will pay 100% of approved costs for new hires but only 70% for retraining. In FY 96-97, it trained 7,600 employees at entry level and 16,000 at upgrade and retention. No more than 20% of total appropriation can go to any one company. Administrative costs are limited to 5% except for post-secondary and nonpublic where it is 8%.

South Carolina

The Technical Special Schools program began in 1961 and is a division of the college system. It was started to increase economic development, to expand beyond the textile industry and agriculture focus.

The program is focused on companies creating new jobs either through expansion or relocation to the state. Initially, the program dealt primarily with manufacturing, but now they also aid distribution and a very small number of service companies. The amount of soft-skills training has increased dramatically. Training focuses on value-added processes. The program is run on tax dollars. They recruit as well as prepare all of the training materials and provide instruction. Instructors range from their own staff of 60 to college instructors to company personnel who are "moonlighting." Hourly instructor pay varies depending on the type of training from approximately $15-$35. In FY 96-97, 9,475 employees completed training from 302 companies.

Appendix B:

Interviews with In-house Trainers

We surveyed several in-house training providers and collected estimates on the costs for the types of training offered. Our survey was not a random sample, and we did not attempt to ensure that the contacted training departments were representative of in-house training efforts in California. Moreover, because of the issues outlined in the "In-house Costs Per Trainee Hour" section, we have little confidence that these estimates represent the full cost of providing in-house training for many of the firms contacted. The company accounting systems and the focus of the training department personnel are simply not conducive to obtaining that information. Nonetheless, we report the results of the survey with the number of respondents in each case in Table B-1, and we caution the reader that the reported in-house cost averages probably underestimate the true cost per trainee hour but by an unknown magnitude.

The $25-50 per hour cost per person hour of in-house training personnel in Table B-1 was derived by taking the annual salary of the trainer and dividing it by the number of hours in a work year, typically 2000 hours per year. It is not a "per trainee hour" cost nor should it be considered to be the hourly cost of putting a trainer in front of a group of trainees. That cost would include significant upward adjustments for preparation time and support activities. In contrast, the $50-$250 range of costs reported for outsourced trainers is an hourly cost of putting a trainer in front of a group of trainees since the usual basis of pay for the outsourced trainers is contact hours. That is, the outsourced trainers typically are compensated for their preparation and support activity time by the amount they charge per contact hour.

Table B-1
In-house Training Costs

Type of Training	Average Cost per Trainee Hour	Count
Customer Service	$ 12.00	1
Management Skills	$ 17.75	7
TQM	$ 10.76	4
Project Management	$ 13.07	2
SPC	$ 13.35	3
Office Automation	$ 16.86	2
CAD/CAM	$ 12.72	2
Computer Programming	$ 22.24	3
Basic skills	$ 16.40	1
Pay inside trainers	$ 25-50 per hour*	
Pay outside trainers	$50-250 per hour*	

*These are "costs per hour" and not "cost per trainee hour." See the text for an explanation.